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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,739	01/12/2001	David R. Pehlke	8194-443	9747

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EXAMINER

NGUYEN, SIMON

ART UNIT PAPER NUMBER

2685

DATE MAILED: 01/09/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/759,739

Applicant(s)

PEHLKE ET AL.

Examiner

SIMON D NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-26 and 29-44 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 27 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 10-13, 16-19, 22-26, 31-39, 42-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Katz (4,882,547).

Regarding claim 1, Katz discloses an apparatus for monitoring a power amplifier coupled to a transmission medium (abstract, fig.1), the apparatus comprising: a detector circuit (#30 of fig.1), coupled to the transmission medium (fig.1), that generates first and second detector signals corresponding to fundamental and harmonic components, respectively, of a power amplifier output signal produced by the power amplifier (fig.1, column 3 lines 34-67); and a comparing circuit, coupled to the detector circuit, that compares the first and second detector signals (column 4 lines 1-22, column 7 lines 20-67).

Regarding claim 17, this claim is rejected for the same reason as set forth in claim 1, Katz further discloses the amplifier coupled to an antenna ((column 3 line 47, fig.1) and a control circuit (column 4 line 14, fig.1).

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Regarding claim 36, this claim is rejected for the same reason as set forth in claim 1.

Regarding claims 2-7, 32-33, 37-38, 43-44, Katz further discloses the output signal indicating linearity of the power amplifier (column 7 lines 7-67), generate a second detector signal without requiring phase information (fig.1), wherein the detector circuit comprises first and second directional couplers (column 4 lines 29-34, fig.2a) and power detectors, wherein the power detector comprises first and second power detectors, coupled to a filter that generates a second detector signal (fig.1, column 4 lines 55-65), and wherein the filter is capacitive (column 4 line 67).

Regarding claims 10-11, these claims are rejected for the same reason as set forth in claims 5-6.

Regarding claims 12, 34, these claims are rejected for the same reason as set forth in claim 4.

Regarding claims 13, 31, 39, Katz further discloses the first and second signal represent first and second powers for the fundamental and harmonic components, respectively (column 5 lines 3-16).

Regarding claim 16, 35, 42, Katz discloses a plurality of signals passing through the amplifier (column 1 lines 17-23) that means passing through a plurality of second detector signals.

Regarding claim 18, this claim is rejected for the same reason as set forth in claim 2.

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Regarding claim 19, Katz discloses the control circuit for comparing the first and second detector signals (column 7 line 20), controlling level of an input signal (column 5 lines 3-16) and a DC bias of the power amplifier (column 7 lines 8-13).

Regarding claims 22-23, Katz further discloses the control circuit comprises a variable gain circuit and a bias control circuit (column 7 lines 7-35).

Regarding claims 24-25, these claims are rejected for the same reason as set forth in claims 3-4, respectively.

Regarding claim 26, this claim is rejected for the same reason as set forth in claim 7.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz (4,882,547).

Regarding claims 20-21, Katz discloses the controller (40 of fig.1) used in a transmission portion having a processor (column 3 line 10), a modulator (column 1 line 25), and a power amplifier (#14 of fig.1) and wherein the processor is responsive to the detector circuit to generate the level control signal in responsive to a comparison of the

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first and second detector signals and wherein the processor is further operative to apply a bias control signal (fig.1, column 7 lines 3-67). However, Katz does not specifically disclose the processor is baseband processor. It should be noted that, since Katz discloses monitoring the power amplifier for the transmission portion, the processor is obvious to be a baseband processor in order to process the signals to baseband signals prior to transmit.

5. Claims 14-15, 29-30, 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz (4,882,547) in view of Pickett et al. (5,196,808).

Regarding claim 14-15, 29-30, 40-41, Katz discloses the first detector signal represents the power for the fundamental component and the second detector signal represents the power for the harmonic component (fig.2, column 5 lines 3-67). However, Katz does not specifically disclose the first detector signal represents the forward power and the second detector signal represents the reflected power. Pickett, in the same kind of invention, discloses a first detector signal represents a forward power and a second detector signal represents a reflected power (fig.1, column 3 lines 58-59). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Katz, modified by Pickett to detect a malfunction of the type of signal and turning off the power amplifier in order to prevent damage to a circuit board.

Allowable Subject Matter

6. Claims 8-9, 27-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 8-9, 27-28, the prior art of record fails to disclose a second directional coupled generates a third output signal corresponding to a reflected fundamental component.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamashita (6,625,429) discloses an apparatus for monitoring a power amplifier coupled to a transmission medium (abstract, fig.1), comprising: a detector circuit (#110, 105 of fig.1), coupled to the transmission medium (fig.1), that generates first and second detector signals corresponding to fundamental and harmonic components, respectively, of a power amplifier output signal produced by the power amplifier (column 3 lines 1-12); and a comparing circuit, coupled to the detector circuit, that compares the first and second detector signals (column 3 lines 29-41).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (703) 308-1116. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

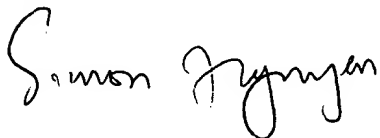
Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Simon Nguyen

January 6, 2004

A handwritten signature in cursive script that reads "Simon Nguyen".